

REMARKS

This application pertains to a novel process for separating solid catalysts, present in dissolved or colloidal form from solutions in a nonaqueous solvent with the aid of a membrane.

Claims 1, 2, 4-8 and 10-17 are pending.

REJECTIONS UNDER 35 USC § 102(b)

Claims 1, 2, 4-8, 10, 11, and 15-17 stand rejected under 35 U.S.C. 102(b) as anticipated by Karau (US 6,472,571).

Examiner contends that arguments traversing the rejection of claims 1, 2, 4-8, 10, 11 and 15-17 as being anticipated by Karau is not found persuasive.

Besides from all previous responses to office actions and argumentations thereon, which are hereby maintained by the Applicant, the examiner contends that the membrane of the Karau reference has a non-uniform pore size across its thickness and that this is characteristic of an asymmetric membrane. Therefore, Applicants limitation of Claim 1 with regard to the asymmetric nature of the membrane is argued by the Examiner to be met by the disclosure of the Karau reference. The Examiner further argues that the Applicant fails to show evidence that the membrane of the Karau reference is not asymmetric.

The examiner is kindly requested to refer to the previously submitted reply to the office action dated 2008-04-10, wherein the Applicant pointed out that:

"Karau discloses a membrane comprising an inorganic separation membrane (i.e. backing layer) having pore diameters of greater than 0.1 nm and comprising an interlayer having a pore diameter of less than 200 nm. (Col. 4, lines 1-8). The backing layer may be made up from one or more inorganic oxides, preferably alumina (Col. 4, lines 10-12). The interlayer is disclosed to be at least one (Col. 4, lines 12-13) and each of one can be made up from inorganic oxides as well (Col. 4, lines 13-14). The interlayer may be modified with organic components (Col. 4, lines 15-17).

Applicant's membrane is different from that in stating that it is asymmetric, which is not disclosed, anticipated or suggested in the Karau reference."

Therefore, Applicants have in fact provided evidence that Karau does not disclose that particular limitation.

Applicants respectfully point out that an asymmetric porous membrane, comprising at least three layers, each having a pore size different from the other two, must be present according to Applicants' Claim 1.

One has to distinguish between a layer, which might display a measurable pore size and a modification of such layer, which would not have a pore size. Therefore, the modification of any layer does not produce another layer according to that definition, as that would not have pore size.

Karau discloses "a backing layer (...) of one or more inorganic oxides" (Col. 4, Lines 10-11), "one or more interlayers (...) applied to this backing layer" (Col. 4, Lines 12-15), which can be modified with organic components (Col. 4, Lines 15-17). Backing layer and interlayer possibly might be read on Applicants' at least three layers and both of which have a different pore size. However Karau does not distinguish between the pore sizes of potentially existent multiple interlayers.

Accordingly the combined limitation of at least three layers, each of one having a pore size different from the other two is not disclosed by Karau.

Therefore the Karau reference neither anticipates nor suggests Applicant's Claim 1 and the rejection of Claim 1 under 35 USC § 102(b) as being anticipated by Karau et al. (US 6,472,571) should now be withdrawn.

As Claims 2 to 8, 10, 11, 12-14 and 15-17 are dependent on Claim 1 the rejection of these under 35 USC § 102(b) as being anticipated by Karau et al. (US 6,472,571) should now be withdrawn as well.

REJECTIONS UNDER 35 USC 103(a)

Claims 1, 2, 4-8, 10, 11, and 15-17 alternatively stand rejected under 35 U.S.C. 103(a) as obvious over Karau (US 6,472,571).

As pointed out Karau fails to disclose an asymmetric porous membrane having at least three layers, each having a pore size different from the other two.

In the Karau reference it is taught that "the interlayer forms the actual small pore diameter required for retention, whereby this can be modified (...) in order to modify its separation properties. (Col. 3, Lines 33-44). Even though Karau does not explicitly disclose the technical effect produced by the "backing layer" its usage is related to mechanical stability of the membrane (see Col. 2, Lines 21-26).

Hence those of ordinary skilled in the art would expect a "backing layer" for mechanical support purposes and an "intermediate layer" for separation purposes.

Therefore those of ordinary skilled in the art would not be motivated to provide another intermediate layer, as no beneficial effect would be expected from the teaching of the Karau reference.

Therefore Applicants' claims are not obvious over Karau (US 6,472,571) and the rejection of Claims 1, 2, 4-8, 10, 11 and 15-17 under 35 USC § 103(a) as obvious over Karau (US 6,472,571) should now be withdrawn.

Claims 12-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Karau (US 6,472,571) as applied to Claim 2 above and further in view of WO (WO 01/07157).

The Examiner contends that the Applicant does not provide substantive reasoning as to why the claims are not obvious over Karau in view of WO.

However, WO discloses "pathways (...) having a narrow limiting pore diameter distribution of less than 30%" and "all of the pores have a (...) limiting pore diameter (...) and a limiting pore diameter distribution no greater than ..." (Page 9, second paragraph).

Such disclosure teaches away from having asymmetric membrane properties, wherein at least three layers, each of one having a pore size different from the other two, because the narrow limiting pore diameter distribution would no longer be met.

Therefore no teaching or suggestion can be found in this combination of references with regard to an asymmetric arrangement of at least three layers, each of which having a pore size different from the other two.

Hence Claims 12 to 14 as well as Claims 2 and 1 from which they depend are not obvious over Karau (US 6,472,571) as applied to Claim 2 and further in view of WO (WO 01/07157) and therefore the rejection of Claims 12-14 under 35 USC § 103(a) as obvious over Karau as applied to Claim 2 and further in view of WO 01/07157 should now be withdrawn along with any other rejection of the preceding Claims under 35 USC § 103(a).

In view of the present remarks, it is believed that claims 1,2, 4-8 and 10-17 are now in condition for allowance. Reconsideration by the Examiner is respectfully requested, and the allowance is courteously solicited.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If any extension of time for this response is required, Applicants request that this be considered a petition therefor. Please charge the required petition fee to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fee or credit any excess to Deposit Account No. 14-1263.

Respectfully submitted,
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